

(2). A firm has a production technology given by: $Q = L^{0.25}K^{0.25}$, initial input prices are given by $w = 1$ and $r = 1$. Suppose, for the moment, that the amount of capital is fixed at $K = 4$.

- (a). Find the marginal product of labor (06 marks)
 (b). Is the marginal product of labor diminishing? Explain why? (04 marks)

Suppose now that the period is long enough to adjust all the inputs.

- (c). Find the capital-labor ratio. (03 marks)
 (d). Find the returns to scale of this production technology. (02 marks)
 (e). What is the optimum output level? (06 marks)
 (f). If the rental price of capital is doubled, what happens to the profit maximizing output level? (04 marks)

(Total 25 marks)

(3).

- (a). Define Michael Porter's "value chain" (02 marks)
 (b). List four primary activities and three secondary activities of value chain (07 marks)
 (c). Describe the buyer driven and producer driven value chains (04 marks)
 (d). Discuss the difference between value chain and value chain analysis (05 marks)
 (e). Explain why value chain analysis is important for Non-Managerial professions. (07 marks)

(Total 25 marks)

(4).

Select a product or a process that you expect to add value and explain why and how you expect to add value to the selected process or product according to economic theories.

(Total 25 marks)

(5).

- (a). Graphically explain the technological change (using a PPF) (4 marks)
 (b). Discuss the impacts of technological change (4 marks)
 (c). What does it mean by increasing productivity? (4 marks)
 (d). Why productivity is important for economic growth? (4 marks)
 (e). Define the terms Inventions, Innovations and Diffusion (3 marks)
 (f). Discuss the relationship between innovations and economic profit (6 marks)

(Total 25 marks)

(6).

Write short note on five (5) of the following

- (a). Production Possibility Frontiers
 (b). Increasing Opportunity Cost
 (c). Expansion Path
 (d). Technological Change
 (e). Industrial Innovation
 (f). Product Innovation and Patent Rights
 (g). Economic Value Added

(Total 25 marks)

